

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

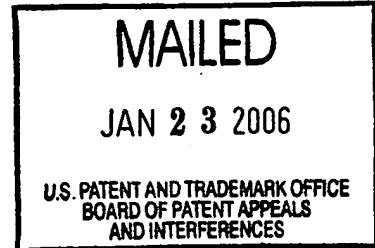
## UNITED STATES PATENT AND TRADEMARK OFFICE

### BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

*Ex parte* GREG ALAN KRANAWETTER and MARK ALAN SCHULTZ

Appeal No. 2005-2483  
Application No. 09/319,326

ON BRIEF



Before KRASS, BARRY, and SAADAT, *Administrative Patent Judges*.  
BARRY, *Administrative Patent Judge*.

### DECISION ON APPEAL

A patent examiner rejected claims 1-17. The appellants appeal therefrom under 35 U.S.C. § 134(a). We affirm.

## I. BACKGROUND<sup>1</sup>

The invention at issue on appeal concerns compression and decompression of data. Advances in digital technology have been accompanied by associated developments in associated fields such as the field of high definition television ("HDTV"). The MPEG<sup>2</sup>-2 standard for compressing video signals is a one such development. This widely accepted image processing standard has been found attractive for use with satellite, cable, and terrestrial broadcasting systems including HDTV systems. (Spec. at 1.)

---

<sup>1</sup>At the time of the appellants' brief, an appeal brief was required to include "[a] concise explanation of the invention defined in the claims involved in the appeal, which shall refer to the specification by page and line number, and to the drawing, if any, by reference characters." 37 C.F.R. § 1.192(c)(5)(2002) (emphases added). "[I]t is preferable to read the appealed claims on the specification and any drawing." M.P.E.P. § 1206. "[R]eference to page and line number of the specification . . . is considered important to enable the Board to more quickly determine where the claimed subject matter is described in the application." *Id.* Here, the *Summary of the Invention* section of the appellants' brief refers to neither pages and lines of their specification nor reference characters of their drawings. Nor does the section read the claims on the specification and drawings.

The current requirements for a summary of claimed subject matter are set forth in 37 C.F.R. § 41.37(c)(1)(iv). The appellants should ensure that their future briefs satisfy those requirements.

<sup>2</sup>"MPEG" is an abbreviation for the Motion Picture Experts Group. (Spec. at 1.)

For its part, the appellants' invention decodes and decompresses MPEG-coded data to produce decompressed image pixel blocks. More specifically, the invention includes a motion compensation network coupled to a frame memory to produce finally decoded pixel data for display. The decompressed MPEG data are recompressed by plural parallel "recompressors" before storage in the frame memory. (*Id.*, abs.)

A further understanding of the invention can be achieved by reading the following representative claim.

10. A method of processing a datastream of compressed MPEG coded image representative data comprising the steps of:

decompressing said compressed data to produce decompressed data;

recompressing a first portion of said decompressed data using a first recompressor to produce first recompressed data;

recompressing a second portion of said decompressed data using a second recompressor to produce second recompressed data; and

storing said first and second recompressed data in memory .

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,701,160 ("Kimura") and U.S. Patent No. 6,028,635 ("Owen").

## II. OPINION

"[T]o assure separate review by the Board of individual claims within each group of claims subject to a common ground of rejection, an appellant's brief to the Board must contain a clear statement for each rejection: (a) asserting that the patentability of claims within the group of claims subject to this rejection do not stand or fall together, and (b) identifying which individual claim or claims within the group are separately patentable and the reasons why the examiner's rejection should not be sustained."

*In re McDaniel*, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) (citing 37 C.F.R. §1.192(c)(7) (2001)). "If the brief fails to meet either requirement, the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim." *Id.*, 63 USPQ2d at 1465.

Here, the appellants stipulate, "All claims stand together." (Appeal Br. at 3.) Therefore, we select claim 10 as representative of all the claims, viz., claims 1-17. With this representation in mind, rather than reiterate the positions of the examiner or the appellants *in toto*, we address the two points of contention therebetween.

*A. Motivation to Combine Teachings*

The examiner finds, "it would have been obvious for one of ordinary skill in the art incorporating the Owen recompressors into the Kimura parallel decoders so that space in the Kimura associated memory is conserved. . . ." (1st Action on Merits<sup>3</sup> at 3.)

The appellants make the following argument

[T]o combine Owen et al. with Kimura et al. the circuit of Kimura et al. would require an additional re-encoder and decoder for each sub-area. These additional elements would greatly increase both the size and cost of the circuit of Kimura et al. This is in direct contrast to the small size, low cost and speed objective stated repeatedly throughout Kimura et al.

(Appeal Br. at 5.)

"The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact." *In re Gartside*, 203 F3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000) (citing *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). A suggestion to combine teachings from the prior art "may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved." *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339,

---

<sup>3</sup>"We advise the examiner to copy his rejections into his examiner's answers," *Ex parte Metcalf*, 67 USPQ2d 1633, 1635 n.1 (Bd.Pat.App.& Int. 2003), rather than merely referring to "rejection[s] . . . set forth in prior Office Action. . . ." (Supp. Examiner's Answer at 3.)

1335, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999) (citing *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998)). In discerning a suggestion to combine teachings from the prior art, "the Board must weigh each reference for its power to suggest solutions to an artisan of ordinary skill. The Board must consider all disclosures of the prior art. . . ." *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) (citing *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976)).

Here, Kimura discloses "an image decoding apparatus. . . ." Col. 1, l. 7. As admitted by the appellants, Owen "discloses reducing the memory required for decompression of a compressed frame." (Appeal Br. at 3.) More specifically, the latter reference explains that "the compressed frame is decompressed in the decoder module to obtain a decompressed frame. The decompressed frame is compressed in the DCT [i.e., a Discrete Cosine Transform] encoder module to obtain a recompressed frame. The recompressed frame is then stored in memory." Col. 5, ll. 23-27. "Because the frames that are used in the decoding of other frames or that are displayed are stored in a compressed format, the decoder requires much less memory." *Id.* at ll. 37-39.

"[A]rgument of counsel cannot take the place of evidence." *In re Budnick*, 537 F.2d 535, 538, 190 USPQ 422, 424 (CCPA 1976) (citing *In re Schulze*, 346 F.2d 600,

145 USPQ 716 (CCPA 1965); *In re Cole*, 326 F.2d 769, 140 USPQ 230 (CCPA 1964)).

Here, although the appellants argue that incorporating recompression into Kimura's decoding scheme "would greatly increase . . . the size . . . of the circuit of Kimura," (Appeal Br. at 5), Owen belies this argument. Specifically, the latter reference explains that its "advantages are achieved without a significant increase in die area of the decoder. . . ." Col. 5, ll. 62-64. Beyond not increasing the area of the die, moreover, Owen teaches that its "reduction in the required memory [actually] allows the memory to be smaller. . . ." *Id.* at ll. 40-41.

"That a given combination would not be made by businessmen for economic reasons does not mean that persons skilled in the art would not make the combination because of some technological incompatibility. Only the latter fact would be relevant."

*In re Farrenkopf*, 713 F.2d 714, 718, 219 USPQ 1, 4 (Fed. Cir. 1983) (citing *Orthopedic Equipment Co. v. United States*, 702 F.2d 1005, 1013, 217 USPQ 193, 200 (Fed. Cir. 1983)). Here, although the appellants allege that incorporating recompression into Kimura's decoding scheme "would greatly increase . . . the . . . cost . . . of the circuit of Kimura," (Appeal Br. at 5), the alleged additional cost would not discourage one of ordinary skill in the art from seeking the advantages expected therefrom. Furthermore, Owen belies the argument by teaching that its recompression offers "significant cost reduction in the cost of the decoder, col. 5, ll. 53-55, and "decreas[es] overall system

cost. . . ." *Id.* at ll. 60-61. Therefore, we agree with the examiner's finding that the advantages of reducing the amount and size of memory would have motivated persons skilled in the art to combine teachings from Kimura and Owen.

*B. Suggestion of the Combined Teachings*

The examiner asserts, "The Kimura method, now implementing the Owen first and second recompressing steps in each one of the Kimura decoders (Kimura: figure 17, elements 1702-1 through 1702-4), has all of the features of claim 10." (1st Action on Merits at 5.) The appellants make the following argument.

Owen et al. neither disclose nor suggest a plurality of similar, concurrently operative compressors as in the present claimed invention. Owen et al. also neither disclose nor suggest each of the plurality of compressors recompressing different datastreams derived from said decompressed data to produce recompressed data as in the present claimed invention.

(Appeal Br. at 5.) "In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the representative claim at issue to determine its scope. Second, we determine whether the construed claim would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at \*2 (Bd.Pat.App & Int. 2004).

a. Claim Construction

"Analysis begins with a key legal question -- *what is the invention claimed?*"

*Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed.

Cir. 1987). In answering the question, "the Board must give claims their broadest reasonable construction. . . ." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claim 10 recites in pertinent part the following limitations: "recompressing a first portion of said decompressed data using a first recompressor to produce first recompressed data; [and] recompressing a second portion of said decompressed data using a second recompressor to produce second recompressed data. . ." Giving the representative claim its broadest, reasonable construction, the limitations require at least two recompressors for producing respective recompressed data.

b. Obviousness Determination

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Massingill*, at \*3. The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . ." *In re Zurko*, 258 F.3d 1379, 1383, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1,

17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)). "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck*, 800 F.2d, 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)). "'Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.'" *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886-87 (Fed. Cir. 1985) (quoting *Keller*, 642 F.2d at 425, 208 USPQ at 881).

Here, the examiner's rejection is based on the combination of Kimura and Owen. In Kimura, "FIG. 17 is a diagram showing constitution of an image decoding apparatus. . . ." Col.9, ll. 66-67. More specifically, "[t]he decoding apparatus 1700 is a facility in which a code string created by the image encoding apparatus 1 or 800 is supplied to restore an original image therefrom. The code string 7 is fed to a code dividing or distributing circuit 1701 to be fed as codes 1701-1 to 1701-4 respectively corresponding to partitions beforehand subdivided." Col. 16, ll. 2-7. Figure 17 shows that the codes 1701-1 to 1701-4 are supplied to small decoders 1702-1 to 1702-4. It is uncontested that these decoders perform decompression.

For its part, Owen couples a decoder "to a DCT encoder module, which has an output coupled to . . . memory." Abs., ll. 8-9. In operation, the output of the decoder is "compressed in the DCT encoder module 150 to obtain a recompressed frame. The recompressed frame is then stored in the memory 180." Col. 7, ll. 27-29. As mentioned regarding the first point of contention, the latter reference discloses advantages to recompressing frames before storing.

In summary, Kimura discloses plural decoders for producing plural streams of decompressed data. Owen discloses coupling its decoder to a recompressor, in a one-to-one relation to recompress the data from the decoder. When the teachings of the two references were combined, we are persuaded that those of ordinary skill in the art would have coupled each of Kimura's decoders 1702-1 to 1702-4 to a respective recompressor to produce respective streams of recompressed data. Therefore, we affirm the obviousness rejection of claim 10 and of claims 1-9 and 11-7, which fall therewith.

### III. CONCLUSION

In summary, the rejection of claims 1-17 under § 103(a) is affirmed. "Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences. . . ." 37 C.F.R. § 1.192(a). Accordingly,

our affirmance is based only on the arguments made in the brief. Any arguments or authorities not included therein are neither before us nor at issue but are considered waived. *Cf. In re Watts*, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004) ("[I]t is important that the applicant challenging a decision not be permitted to raise arguments on appeal that were not presented to the Board.") No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

**ERROL A. KRASS**  
Administrative Patent Judge

~~LANCE LEONARD BARRY~~  
Administrative Patent Judge

**MAHSID D. SAADAT**  
Administrative Patent Judge

THOMAS LICENSING INC.  
PATENT OPERATIONS  
P. O. BOX 5312  
PRINCETON, NJ 08543-5312